reporting for some of these diseases. The North Carolina Citizen Survey asks a few health-related questions, but with a limited sample size, estimates below the state level may not be stable. Besides a full-scale, very expensive health interview and examination survey, the major remaining way to obtain systematic morbidity information is through hospital discharge data. Though only sickness that is treated in the hospital is reflected in these data, this component is very important for assessing the health status of a population.

In 1978, general hospitals in North Carolina were operating with two disease coding systems: ICDA-8 and H-ICDA-2. The H system, employed by all PAS hospitals and some others, is an adaptation of ICDA-8 for hospital usage developed by the Commission on Professional and Hospital Activities (CPHA) in Ann Arbor, Michigan. For large categories such as heart disease or cancer, the two systems yield almost identical results, but for more specific diagnoses there may be significant differences in coding. To facilitate the present and also future analysis of the discharge data, diagnoses for all hospitals using H-ICDA-2 were converted to the corresponding ICDA-8 code using a conversion tape purchased from CPHA. As a result, diagnosis data from the two types of hospitals can be pooled for analysis, and the data become more comparable to mortality coding, which employed ICDA-8 for 1978 events.

Discharge Rates for Leading Causes of Mortality

The State Center for Health Statistics (SCHS) regularly publishes mortality rates for the leading underlying causes of death, so it seemed natural to compute discharge rates for ten of these diagnostic categories. This will allow, as a point of departure, comparisons for categories familiar to most readers of SCHS publications. Four categories--suicide, homicide, motor vehicle accidents, and other accidents--were omitted because of a difference between morbidity and mortality coding. Accidents, poisonings, and violence are classified both under nature of injury (e.g., contusion of the brain) and under external cause (e.g., motor vehicle accident). External causes are always chosen as the underlying cause of death, with the nature of injury treated as a mentioned condition on the certificate. On the hospital medical record, however, the nature of injury code is always chosen as the final diagnosis (first listed), and the external cause is coded as an additional diagnosis on the record. So it is not possible to compare hospital and death certificate coding for externally-caused conditions by looking only at the first listed diagnosis.

Table 2 displays, for the state, general hospital discharge rates based on final diagnosis explaining admission and death rates based on underlying cause for ten diagnostic categories. The discharge rates refer to N.C. residents, not facilities, and the October data have been multiplied by twelve and adjusted for missing hospitals (6 percent of the patients missing for the state as a whole) to yield the annualized rates shown here. Among the ten diagnoses studied, heart disease is the most frequent cause of hospital admission, followed by cancer, cerebrovascular disease, influenza and pneumonia, chronic obstructive lung disease, and diabetes. The ten causes in Table 2 account for about 18 percent of all hospital discharges. The total rate shown here includes discharges of newborns from the hospital.

Heart disease, cancer, and cerebrovascular disease are the top three causes of death. Comparing discharge and death rates reveals that hospital episodes for each of the disease categories occur much more frequently than deaths. Overall, there are about 19 general hospital discharges for every North Carolina resident death, and this ratio for the state as a whole varies from 32 for hypertension as the primary diagnosis to 3 for heart disease as the primary diagnosis. Other causes with a high discharge-to-death ratio are diabetes, influenza and pneumonia, chronic obstructive lung disease,